
**2.0 Regulation
Governing
Individual Onsite
Wastewater
Disposal**

**Design Standard X
Overland Discharge**

Mississippi State Department of Health
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Mississippi State Department of Health
DESIGN STANDARD X
OVERLAND DISCHARGE

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DESIGN STANDARD X OVERLAND DISCHARGE

I. Introduction

Overland discharge is essentially a method to dispose of treated effluent. Overland discharge may be spray irrigation, point discharge or discharge via a manifold. Careful evaluation of the site, soils and geographical conditions are necessary to prevent runoff, erosion, groundwater pollution and nuisance conditions.

II. Treatment

Wastewater disposed of by overland discharge must be treated to EPA secondary treatment standards. Untreated or primary (partially) treated wastewater shall not be disposed of by overland discharge.

III. General

1. Overland discharge of treated wastewater may be used when suitable soil is not present for underground absorption. However, on property adjacent to sensitive waters, overland discharges cannot be used on soils of gravel and coarse sands texture as these soils may not provide the necessary treatment to protect water quality.
2. The discharge must be distributed from an outlet pipe equipped with a manifold/ header or flow dividing device (**See FIGURE 1**) in such a manner as to maintain the effluent on the property owned or controlled by the generator through a recorded easement. The manifold/header or flow dividing device must be constructed to be self draining.
3. The land area receiving the discharge shall have a minimum six inches of naturally occurring soil free of a restrictive horizon or predominately gray color. The land area receiving the discharge shall be maintained to prevent surface accumulation or ponding of effluent. The location for overland discharge must be maintained with sod, permanent vegetative cover or a wooded area.
4. Treated effluent that is to be disposed of by overland discharge must be adequately disinfected **See [Design Standard XI, Disinfection]**.
5. The land area receiving the discharge must be of sufficient size to maintain the outermost edge of the effluent the following prescribed distances:

- a. 50 feet from property lines, down slope or same grade, and dwellings; 10 feet from property lines up slope.
 - b. 100 feet from any well or source of potable water and any sensitive waters, or other sensitive areas.
6. If effluent is to be delivered to the manifold or flow diverting device under pressure, the distribution system shall be designed to provide a pressure at the point of discharge not to exceed five (5) pounds per square inch.

IV. Location of Overland Discharge Systems

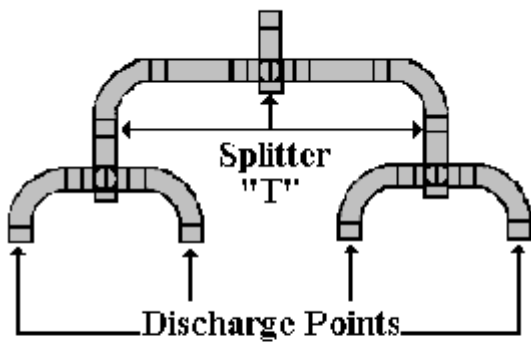
1. Any vessel holding wastewater shall be located a minimum of 50 feet from any public, private or individual potable water source.
2. The effluent disposal field shall be located at a lower elevation and a minimum of 100 feet from any public, private or individual potable water source.
3. Potable water lines shall not pass under or through any part of the sewage disposal system. Where a water supply line must cross a sewer line, the bottom of the water service within ten feet of the point of crossing, shall be at least 12 inches above the top of the sewer line. The sewer line shall be of Schedule 40 pipe with cemented joints at least ten feet on either side of the crossing. Water and sewer lines shall not be laid in the same trench. The water and sewer lines shall maintain a minimum horizontal separation distance of 10 feet.
4. The area of the effluent disposal field shall not be used for vehicular traffic or vehicular parking.
5. Septic tanks, treatment plants, disinfection units and/or pump chambers shall not be located under dwellings or other permanent structures.
6. Effluent disposal systems shall not be located in depressed areas where surface water will accumulate. Provision shall be made to minimize the flow of surface water over the effluent disposal field.
7. Surface wastewater disposal fields located on slopes of less than eight percent shall have a minimum setback from the outermost edge of the effluent and recreational waters, shellfish waters or other sensitive areas as prescribed in **TABLE I**.
8. Surface wastewater disposal fields located on slopes of greater than eight percent shall be located a minimum of 100 feet from recreational waters, shellfish waters and other sensitive

areas.

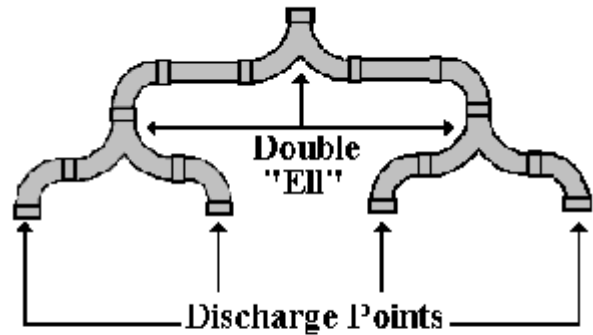
9. Slopes of greater than 30% shall not be considered for surface disposal field installation.
10. Where all or part of the onsite wastewater disposal system is proposed to be installed on property other than the owner's, an easement in perpetuity shall be legally recorded in the proper county. The easement shall be of sufficient size to permit access, construction and maintenance of the onsite sewage disposal system.
11. No site for a surface disposal field shall be approved which is located wholly within an area which is frequently flooded, swamp, marsh, or wetland.
12. When a proposed lot is located partially within a frequently flooded area, that portion of said lot not within the flood prone area may be considered for approval for the effluent disposal field.
13. Easements or right-of-way areas for utilities, surface or subsurface drainage, roads, streets, ponds or lakes shall not be used as available space for location of individual surface disposal fields.

TABLE I	
Setback Requirements from Sensitive Waters For all Surface Disposal Field Areas on Slopes of 8 Percent or Less:	
*Soil Textural Class	Minimum Distance From Water Edge
Gravel (Skeletal), Coarse sand	Not Applicable
Medium sand, fine sand, loamy sand, sandy loam, silty clay, clay	75 Ft.
Loam, silt, silt loam, sandy clay loam, Silty clay loam, clay loam,	50 Ft.
*The texture of the subsoil material having the greatest permeability rates within two feet below the surface receiving effluent shall be used to determine setback.	

Figure 1
Overland Flow Using Multiple Discharge Points



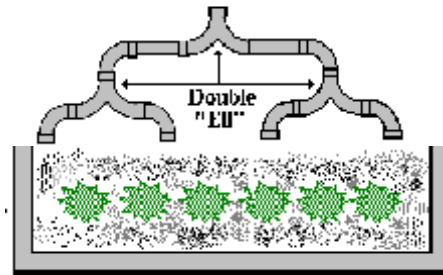
Drawing A
Discharge manifold
Using Splitter "T" Fittings



Drawing B
Discharge Manifold
Using Double "El" Fittings

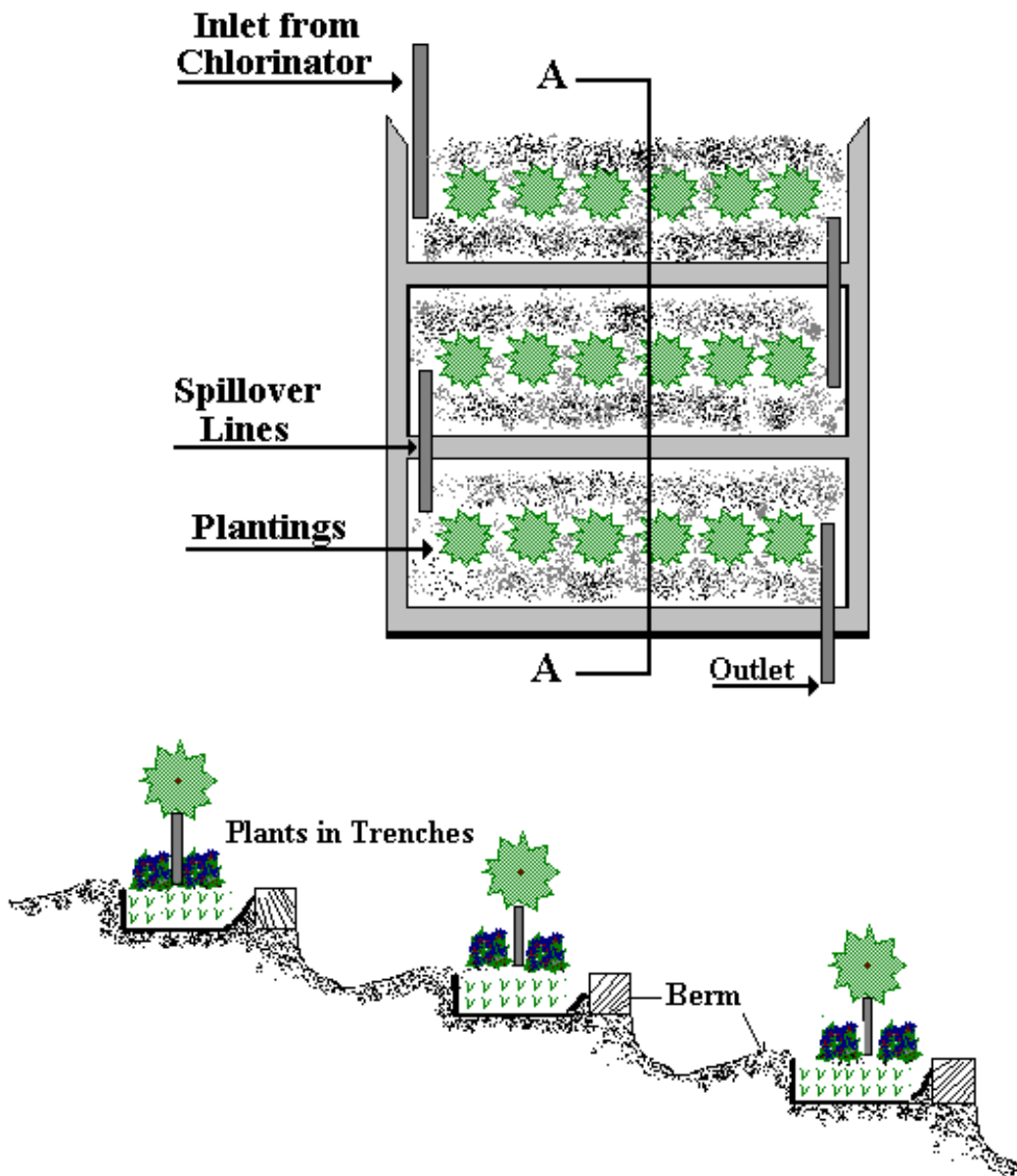
A manifold can be constructed using splitter "T" fittings or double "El" fittings. This will equally divide the effluent into multiple discharge points. Care must be taken to ensure the fittings used are level or effluent will not be divided equally.

The manifold shall be designed, constructed and installed in such a manner that the effluent will be distributed equally and be self draining.



Further absorption of the effluent could be enhanced with the addition of plantings (canna, calla lilies, elephant ears, etc.) in a bed following the distribution manifold.

Figure 1A
Overland Flow Using Terraced Plant Beds



DISCHARGE ROUTED THROUGH TERRACES WITH PLANTINGS.
SECTIONAL DRAWING [AA]

The chlorinated discharge can be routed through terraces with plantings. The terraces shall be bermed to prevent the entrance of surface water. The final discharge point from the terraces must conform to the

setbacks for overland flow discharge.